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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Norbert Kroth

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STAAS & HALSEY LLP

SUITE 700

1201 NEW YORK AVENUE, N.W.

WASHINGTON, DC 20005

EXAMINER

VU, MICHAEL T

ART UNIT

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2617

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/534,380	Applicant(s) KROTH ET AL.	
	Examiner MICHAEL T. VU	Art Unit 2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 December 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 17-36 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 17-20, 29 and 33-36 is/are rejected.
- 7) ☒ Claim(s) 21-28, and 30-32 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments, see Remark, filed 12/14/2009, with respect to the rejection(s) of claim(s) 17-36 under 103(a) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Take (US 5,883,887) in view of Suzuki (US 6,493,540).

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. **Claims 17-20, 29 and 33-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Take (US 5,883,887) in view of Suzuki (US 6,493,540).**

Regarding claims 17, 33, 35 and 36, Take teaches a method for controlling uplink access transmissions in a radio communication system (Fig. 8, Mobile Stations A/B #0301-0302 shows transmit RACH to Base Station #0303, and Fig. 19 shows the uplink access transmission to Base Station), comprising:

determining a random delay time for user equipment to transmit a signal on an uplink access channel based upon a probability distribution that increases in density with increasing delay (see determination, e.g., random numbers are generated, probability is calculated packet delayed, Col. 13, lines 46-55),

Take fails to disclose the random delay time being determined by the user equipment.

However, Suzuki the random delay time being determined by the user equipment (random delay time is determined from the calculated mobile station, Col. 9, lines 8-9), and (Figure #, 6, B4 shows set random number in timer #B4/B5 and complete random delay after it compared).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Take, with Suzuki's teaching, in order to provide a radio random access control for improving the random delay in the mobile station for effectively utilization of the radio time interval.

Regarding claim 18, Take and Suzuki teach the method according to claim 17, wherein the delay time is determined upon receipt of a request for uplink access transmissions from a base station (plurality of mobile stations and a base station randomly transmits and receives data to and from each other, and calculated delay time, Col. 2, lines 41-55) of Suzuki.

Regarding claim 19, Take and Suzuki teach the method according to claim 18, wherein the base station transmits the request on a paging channel **or** on a control channel (Fig. 8, paging RACH that requested from a base station) of Take.

Regarding claim 20, Take and Suzuki teach the method according to claim 17, wherein the signal for which the delay time is determined is a response signal transmitted by the user equipment on a contention based common uplink access channel plurality of mobile stations and a base station randomly transmits and receives data to and from each other, and calculated delay time, Col. 2, lines 41-55) of Suzuki.

Regarding claim 29, Take and Suzuki teach the method according to claim 19, wherein the signal for which the delay time is determined is a response signal transmitted by the user equipment on a contention based common uplink access channel (random delay time is determined from the calculated mobile station, Col. 9, lines 8-9), and (Figure #, 6, B4 shows set random number in timer #B4/B5 and complete random delay after it compared) all of Suzuki.

Regarding claim 34, Take and Suzuki teach the method according to claim 33, wherein the user equipments each perform a comparison of a randomly determined number with the time variable information (Figure #, 6, B4 shows set random number in timer #B4/B5 and complete random delay after it compared) and based on the result of the comparison (Fig. 6 compared and take statistics of result , Col. 9, lines 1-9), each user equipment controls the transmission of said signals on the uplink access channel (the data is transmitted to seven mobile stations including the own station. The maximum random delay time is determined from the calculated mobile station, Col. 9, lines 7-9) all of Suzuki.

Allowable Subject Matter

4. Claims 21-28, and 30-32, are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

With respect to claims 21, the prior art of record fails to teach alone or in combination the method according to claim 17, wherein the probability distribution is determined according to: $p(t) = x \cdot e^{Xt} / (e^{XT} - 1)$ for $t \in [0, T]$ wherein $p(t)$ denotes a probability that a delay time t is selected, T denotes a predetermined maximum delay time, and x is a parameter that controls a rate of change of probability with time.

For claims 22, the method according to 17, wherein the probability distribution is determined according to: $p(j) = q^n - j \cdot q^{n-1} / (1 - q^n)$ for $j \in [0, n]$ wherein n is the number of sub-intervals in a predetermined time interval T , $P(j)$ denotes a probability that sub-interval j is selected, and q is a parameter that controls a rate of change of probability within a sub-interval.

For claims 23, the method according to claim 17, wherein the probability distribution is determined according to: $P(j) = (q^n - j \cdot q^{n-1} - q^n) / (1 - q^n)$ for $j \in [1, n]$ wherein n is the number of sub-intervals in a predetermined time interval T ; $P(j)$ denotes a probability that sub-interval j is selected, and q is a parameter that controls a rate of change of probability within a sub-interval.

For claims 26, the method according to claim 17, wherein a base station associated with a communication network issues a request, after the delay time, the user equipment performs an uplink access transmission as a response to the request, the network determines if the number of user equipments responding to the request exceeds a predetermined threshold, and the network signals to the user equipments to terminate further uplink access transmissions if the threshold is exceeded.

For claims 30, the method according to claim 17, wherein the probability distribution is determined according to: $p(t) = x \cdot \exp(-x \cdot t)$ for $t \in [0, T]$ wherein $p(t)$ denotes a probability that a delay time t is selected, T denotes a predetermined maximum delay time, and x is a parameter that controls a rate of change of probability with time.

Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHAEL T. VU whose telephone number is (571)272-8131. The examiner can normally be reached on 8:00am - 6:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles N. Appiah can be reached on 571-272-7904. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2617

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/MICHAEL T VU/
Examiner, Art Unit 2617

/Charles N. Appiah/
Supervisory Patent Examiner, Art Unit 2617